March 20, 2023
File No. 095561.150

Town of Wareham Zoning Board
C/O Ken Buckland, Director of Planning and Community Development
54 Marion Road
Wareham, MA 02571

Re: True Storage Facility
ZBA Case 4-23
2400 & 2402 Cranberry Highway
Wareham, MA

Dear Ken:

On behalf of the applicant, we are submitting revised plans in response to comments provided in a letter from the Wareham Fire Department dated January 24, 2023, and in a letter from the Initial Peer Review performed by Allen & Major dated February 15, 2023.

Included with this letter are a digital copy, 8 hard copies of the revised plans, and supporting documents, and 3 hard copies of the revised Stormwater Management report incorporating the following comments.

Wareham Fire Department Comments

1. Please provide the fire hydrant locations on the site plan. I believe they are located in the existing conditions but will need to have the hydrants identified on the plan.

   Response: The plans have been updated to identify the existing fire hydrant on the plan.

2. Please provide the proposed location for the Fire Department Connection on the plan for our review.

Nobis Group®
585 Middlesex Street
Lowell, MA 01851
T (978) 683-0891

Response: The proposed location for the Fire Department Connection has been identified on the site and utility plans.

3. Please provide a swept path analysis for our Tower 1. This analysis shall show all turning movements for the apparatus.

   Response: A swept path analysis has been provided for the Tower 1 apparatus.

Peer Review Comments by Allen & Major

Wareham By-Laws and Zoning By-Laws

1. The proposed project is required to obtain a Stormwater Management Permit (SMP) in accordance with Wareham By-Laws Division V, Article XI, Article I Stormwater Management. The applicant should provide documentation on the status of the SMP.

   Response: Per responses from Ken Buckland, Director of Planning and Community Development, and Jonathan Dickinson, Assistant Town Planner, there is not a separate SMP application. The SMP is reviewed in conjunction with the Site Plan Review Application. The public hearing is scheduled to be held with the Zoning Board of Appeals (as the Granting Authority) on March 22, 2023.

2. The proposed project is located within the Groundwater Protection Overlay District (GPOD) per Zoning By-Law Article 4, subsection 440. Since the project proposes lot coverage exceeding the 15% maximum allowed under the GPOD, a Special Permit is required from the Board of Appeals. The applicant should provide documentation on the status of the Special Permit.

   Response: Per conversations with Ken Buckland, Director of Planning and Community Development, the subject parcels are not located within the groundwater overlay district therefore a Special Permit it not required.

3. The design engineer should review Zoning By-Law Article 7, subsection 752.6 Buffer Strip Adjacent to Public Arterials (Route 28) requires industrial uses to be screened from view by a 50-foot wide landscape buffer strip. The proposed parking lot and portions of the internal drive aisles are located within the 50-foot buffer strip.

   Response: Zoning By-Law Article 7, subsection 752.6, requires industrial uses to be screened from view by a 50-foot wide landscape buffer strip. The proposed mini storage facility is not a permitted use in the Industrial District as it is not for industrial storage. Therefore, a use variance was applied for and granted by the Zoning Board of Appeals on July 14, 2021. We believe the intent of the By-Law is to screen industrial uses from public view, however in this case, mini storage is a retail business which requires visibility to be viable. Additionally, the proposed building aesthetics are equal to or exceeding the adjacent businesses including Sav Transport and Ballard Truck Center.

4. Zoning By-Law, Article 750, subsection 752.12 provides guidance on building façade designs facing street and roads. The architect should provide a statement on compliance with this section.

   Response: The architect has provided a statement on compliance with subsection 752.12. The compliance statement and a diagram of the street facing façade are included as an attachment with this response to comments letter. Updated architectural drawings have been provided as a result of façade and photometric compliance revisions.

5. Zoning By-Law, Article 750, subsection 752.15 Site Lighting. Lighting fixture cutsheets have been provided on the architectural set, see Sheet A0931, but exact locations have not been identified on the Site Plans. The applicant should provide a photometric plan showing the footcandle intensity on the property and document compliance with the applicable section.

   Response: The site plan package has been updated to include a photometric plan, light fixture information plan, and the site lighting locations on the site plans.

6. Zoning By-Law, Article 750, subsection 752.17 Site Drainage & Stormwater Retention, reference is made to Zoning By-Law Article 1260. The proposed project is also subject to

Article 12: Performance Standards, subsection 1260 Analysis of Development Impact: Stormwater Runoff in Compliance with MS4. The project is subject to an MS4 Stormwater Management Permit (MS4 SMP) issued by the ZBA. The applicant should provide documentation on the status of the MS4 SMP for the record. The design engineer should provide additional narrative and calculations to show/demonstrate compliance with the required one (1) inch infiltration volume, removal of 90% Total Suspended Solids (TSS) and removal of 60% Total Phosphorus from the total post-construction impervious surfaces.

Response: The Stormwater Management Report has been expanded upon to include additional narrative language and calculations for infiltration volume, removal of TSS and removal of phosphorus in Appendix D. We feel that this project qualifies as a redeveloped site therefore have complied with the 0.8-inch infiltration volume, removal of 80% TSS, and removal of 50% total phosphorus from the total post-construction impervious surfaces.

7. Zoning By-Law Article 9: Parking states that the Building Inspector shall determine the number of spaces required for a use not identified under 921 Table of Parking Regulation. The ZBA may want to inquire with the Building Inspector to confirm the number of spaces is adequate for the proposed use. In support of the twelve spaces shown, the applicant should provide empirical data from similar facilities managed by the developer to support the usage.

   Response: A Transportation Impact Assessment (TIA) was performed by Vanasse & Associates, Inc. The TIA states the off-street parking provided is within the range of rates observed by ITE at similar land uses. Furthermore, the TIA found the expected peak vehicle trips will be: 5 during the weekday morning peak hour, 9 during the weekday evening peak hour, and 10 during the Saturday midday peak hour. The 12 provided parking spaces should provide adequate parking during all peak hours given that self-storage customers do not visit the facility for long. Also storage lockers accessed via overhead doors will have customers briefly park and drop-off/pick-up storage items in front of the lockers rather than use the 12 provided parking spaces.

   Lastly, True Storage has provided the following existing parking counts for other locations:

- *Plaistow, NH*
    - *100k SF 18 parking spaces*
- *Bangor, ME*
    - *80k SF 10 spaces*
- *Warwick, RI*
    - *61k SF 8 spaces*
- *West Mifflin, PA*
    - *61k SF 14 spaces*

The parking space numbers above have proved more than sufficient for the use.

8. Zoning By-Law Article 10: Landscaping – is applicable to all new non-residential development projects. A landscape plan shall be prepared for and submitted in conjunction with any other submittal required for a Special Permit, Site Plan Review or Building Permit. For new projects exceeding 5,000 sf of nonresidential development, the landscape plan shall be prepared by a registered landscape architect whose seal shall appear on the plan. No landscape plan was included in the site plan package. The development team shall provide the required plan to verify and show conformance with Article 10 of the Zoning By-Laws.

   Response: A landscape plan has not been provided with this response to comments due to time constraints. A landscape plan meeting the applicable requirements will be submitted prior to final approval. We request that the Zoning Board of Appeals approve the Site Plan Review Application with the precedent condition that all outstanding peer review comments have been addressed to the satisfaction of the peer reviewer including "Zoning By-Law Article 10: Landscaping".

9. Zoning By-Law Article 11: Signs. The project plans do not depict any signage for the use. A&M recommends that anticipated signs be added to the site plans for consideration by the Zoning Board as applicable and confirmation that signs do not interfere with any sight lines, setback or other operational aspects.

Response: A sign permit will be applied for at a later date once the applicant has selected a third-party manager and the sign has been designed. The signage will comply with all zoning requirements and not interfere with sight lines, setbacks or other operational aspects.

10. Article 15 of the Zoning By-Law outlines the criteria for site development plans including site lighting, dumpsters, fire hydrant locations, landscaping, and an impact statement to the Town services. None of these elements are addressed in the application materials and should be included to meet this requirement or if not applicable, described as such.

    Response: The plans have been updated to include site lighting and fire hydrant locations. No dumpsters will be provided on-site as the use does not produce waste. Adding a dumpster would encourage customers to dump their waste at the site which is undesired. An impact statement for Town services was previously provided. A copy of the impact statement has been included with the resubmittal. A landscape plan addressing By-Law requirements will be provided prior to final approval (see response to comment #8).

Drainage Calculations and Site Plans

11. The design engineer shows a series of catch basins, totaling five (5) interconnected along the easterly and westerly side of the building, prior to discharging into the sediment forebays. MassDEP Stormwater Handbook requires catch basins (CB) to be offline. The CB to CB connection is not permissible as proposed and should be revised accordingly. This action will re-suspend solids and/or floatables negating the purpose of the catch basin hoods and sumps.

    Response: The catch basins have been redesigned to be offline in accordance with the MassDEP Handbook to take credit for pretreatment.

12. The grading plan should be modified to include additional spot grades and contours along the easterly side of the sediment forebay and infiltration basin. During the 100-yr event, the drainage calculations are reporting the 100-yr elevation within the basin to be at 48.05.

Based on the information contained within the plans, it appears that water will overtop the forebay and infiltration basin. The basin sizing as reported in the HydroCAD model appears to be utilizing existing area of the 48 and 49 contours within the tree line. The design engineer should confirm this. If this is the case, the required freeboard elevation of 49.05 would occur off the property in several areas. The basin should be revised to wholly contain the basin onto lands owned by the applicant. The design engineer shall also confirm and verify the proposed infiltration system has been designed in accordance with the Massachusetts Stormwater Handbook (i.e. access road, freeboard, monitoring wells, etc.).

Response: The infiltration basin has been regraded to wholly contain the 100-year storm event with one foot of freeboard on the land owned by the applicant. After basin revisions the 100-year peak elevation in the basin is 47.07. Stormwater from the basin cannot leave the property without exceeding elevation 49.0. Additionally, a 15' wide strip for vehicular access has also been provided around the perimeter of the infiltration basin at elevation 49.0. Lastly, locations for 4 groundwater monitoring wells have been called out on the plans for installation within the infiltration basin floor. No outlet or drawdown devices have been designed for the infiltration basin as there is no elevation on-site in which the outlet can be daylighted as MassDOT will not accept a connection to their closed drainage system.

13. The design engineer shall provide the supporting calculations in accordance with the "Dynamic Field Method" as outlined within the Massachusetts Stormwater Handbook Volume 3, Documenting Compliance.

    Response: Nobis has updated the required recharge volume and drawdown calculations in Appendix C of the Stormwater Management Report in accordance with the "Dynamic Field Method" as outline within the Massachusetts Stormwater Handbook.

14. Since the basin is utilized for 100-year mitigation, the design engineer should update the drawdown time calculations to include the entire storage volume associated with the 100-yr flood elevation event.

Response: The drawdown time calculations have been updated in Appendix C of the Stormwater Management Report to include the 100-yr storage volume.

15. The design engineer has provided detailed calculations associated with the 10-yr design storm, but only provided summary reports for the 2-yr, 25-yr and 100-yr design storm events. Detailed calculations should be provided for all storm events to verify input variables.

    Response: Detailed calculations have been provided for the 2-yr, 10-yr, 25-yr, and 100-yr storm events.

16. In Massachusetts, the length of sheet flow is seldom greater than 50 feet (reference MassDEP Hydrology Handbook for Conservation Commissioners). The design engineer should review the following sheet flow lengths, which exceed 50 feet under existing and proposed conditions, and revise the calculations accordingly or provide justification for the longer lengths.
    a. Subcatchment E-1, sheet flow length equals 100 feet;
    b. Subcatchment E-3, total sheet flow length equals 100 feet;
    c. Subcatchment P-1A, sheet flow length equals 100 feet;
    d. Subcatchment P-3, sheet flow length equals 100 feet;
    e. Subcatchment P-6, sheet flow length equals 100 feet.

    Response: The sheet flow lengths have been revised to meet the 50 feet requirement as noted in the comment above.

17. The Proposed Drainage Area Plan depicts flow from Subcatchments P-3, P-4, and P-6 continuing to flow to the State Highway Layout. The drawings denote revisions were made to address MassDOT comments. Please provide supporting documentation that these drainage flow paths have been accepted by MassDOT and how they comport with MassDOT Standard Operating Procedure HMD-0202-2-000 on drainage connections to the state highway that include sheet flow runoff conditions.

Response: MassDOT approved the acceptance of pervious runoff flows from Subcatchments P-3, P-4, and P-6. Provided are the relevant comment and resolution forms regarding MassDOT's Drainage Policy HMD-02-02-2-000 (see Highway Operations No. 1 comment) and the permit approval.

18. The design engineer shall provide sediment forebay calculations to confirm/verify compliance with the Massachusetts Stormwater Handbook.

    Response: The sediment forebay calculations have been provided in Appendix D of the Stormwater Management Report to confirm compliance with the Massachusetts Stormwater Handbook.

19. It appears, based on interpolation of existing contours and spots grades, that the proposed infiltration basin does not provide 4-ft separation to the estimated seasonal high water table. Since an infiltration BMP is used to attenuate peak flows during storms greater than or equal to the 10-year 24-hour storm event and separation to seasonal high-water table is less than 4-ft, a mounding analysis is required to show compliance with Standard 3. The design engineer should provide the required documentation along with the supporting calculations for the groundwater mounding analysis.

    Response: A groundwater mounding analysis has been provided in Appendix C of the Stormwater Management Report. The results of the mounding analysis confirm that the mounding under the center of the infiltration basin will not break out at the ground surface.

20. Within the Operation & Maintenance (O&M) Plan and the Stormwater checklist, the design engineer make reference to Proprietary Water Quality Devices, but A&M is unable to locate them on the site plan or within the report. The design engineer shall review the Operation & Maintenance Plan and the Stormwater checklist and revise them accordingly or provide the required documentation.

    Response: No proprietary water quality devices are being proposed for this project. The O&M plan has been updated accordingly.

21. The design engineer provided a HydroCAD routing diagram depicting the pipe connections onsite, however, no data or results on each node was provided. The HydroCAD model utilizes the SCS TR-20 stormwater routing method while the closed drainage computations should be based on the Rational Method. The design engineer should confirm that the catch basin/manhole nodes as provided do not affect the peak flow routing calculations to the recharge systems and/or design points. See also Comment 22 below.

    Response: The HydroCAD pipe information was previously included in the summary report for the 10-year storm for each node. Additionally, the summary reports for the 2-yr, 25-yr, and 100-yr storm events have been provided for each node to verify the results. We believe the HydroCAD model utilizing SCS TR-20 stormwater routing method with a dynamic storage-indication (DSI) routing procedure is an appropriate use for evaluating the pipe conditions effect on the peak flow routing calculations. HydroCAD's DSI routing procedure calculates all nodes at each time step dynamically which allows each node to resbasin to upstream and downstream conditions, such as tailwater. Since a hydrograph produced by the Rational method does not reflect the total runoff or the intensity variations of a real storm, it is not recommended for the design and analysis of infiltration or detention basins. HydroCAD strongly advises that the SCS Unit Hydrograph method be used when basin routing calculations will be performed.

22. The design engineer should provide a pipe analysis to confirm/verify that the proposed stormwater will be routed through the pipe network as proposed and discharge to the recharge area as intended. The engineer is routing 100-year stormwater flows to the subsurface infiltration systems and the pipe analysis should confirm this.

    Response: A pipe analysis has been performed using HydroCAD's dynamic storage-indication routing procedure. Also see comment 21 above.

23. The design engineer should revise the TSS calculation worksheet for the Infiltration Basin and provide two (2) sets of TSS calculation worksheets, one to demonstrate the required 44% TSS removal prior to infiltration and another for the overall TSS removal for the entire drainage system. The infiltration system only receives 80% TSS removal with the

appropriate pre-treatment, therefore the design engineer cannot take additional credit for the sediment forebay in the overall calculation for the entire drainage system. The design engineer should update the TSS worksheets accordingly.

Response: As requested, two TSS calculation worksheets have been provided in Appendix D of the Stormwater Management Report. One to demonstrate the required 44% TSS removal prior to infiltration and another for the overall 80% TSS removal for the entire drainage system.

24. The design engineer should provide appropriate calculations for the sizing of the rip rap apron associated with the proposed flared end section and the anticipated flows. The detail should be updated to show the appropriate dimensions, based on the calculations. The limits of the stone apron should also be added to the site plans.

    Response: Calculations have been provided in Appendix D of the Stormwater Management Report for sizing of riprap aprons entering the infiltration basin. The plans have been updated to show the appropriate dimensions and details of riprap outlet protection apron.

25. The proposed sewage disposal site plan background depicts different site conditions than those contained on other drawing sheets. A&M did not review the proposed site conditions (stormwater basin, grading, drain structures) shown on the sewage disposal sheet but the engineer should confirm the correct information is shown on this sheet to facilitate further review by the Board of Health as part of a disposal works application.

    Response: The sewage disposal system plans were reviewed and approved by the Board of Health in April of 2022. Nobis confirmed with Provencher Engineering (sewage disposal designer) that the revised basin grading results in no impact to the sewage disposal system as it is well outside the minimum breakout slope from the leach field and that the revised drainage line, additional manhole to the new forebay, and the forebay itself also result in no impact to the sewage disposal system. If necessary, we can update the sewage disposal plan with the site plan background conditions from the final approved site plans.

We trust that we have responded to all your comments. If you have questions or require additional information, please contact us at (603) 513-7327 or smcdowell@nobis-group.com.

Sincerely,

NOBIS GROUP®

Sean McDowell, PE
Senior Project Engineer

Attachment

c: File No. 095561.150 (w/attach.)